256 until the desired white shade was obtained. After the milling, the rice is quite warm, and both the chaff and the rice have an odor similar to brewer's yeast.

[462] [482] [415] Women carry the rice to the mill. It is heaped up in baskets set on their heads. Rice straw or a braid of rice stalks is placed over the small towel which rests directly on the head. On this the woman sets the basket with its rice. When the milling is over, the women pick up a handful, blow off the chaff, inspect the rice for wholeness and whiteness, and then put it in a large gunny sack. The chaff is placed in a smaller one. Hulls, occasionally taken, are usually left at the mill to accumulate in a pile outside the mill and there, at [824] frequent intervals, are burned. Sometimes the hulls or the ashes are taken for fertilizer.

[521] Bringing rice for milling is a social occasion for the women. They often have a child on their back. While waiting for their rice to be hulled and milled, they exchange greetings and news with their neighbors or with women from adjoining villages.

[727] As a result of the war, quality of machinery for rice milling differs with villages. Most now have access to a mill. The machinery at Matsuda, being more efficient than the older machines at Hanashiro is able to polish the rice satisfactorily after going through the mill three times. These mills are very busy during the harvest seasons.

● 252 [412] There are also survivals of older methods of hulling and polishing rice. These are no longer used, though many of the old have not lost their skill. Before machine polishing was introduced, the hulls were removed by pounding the rice in a mortar, usually with a long bamboo pole narrowed in the center for a grip. After the hulls were removed, the rice was put through a quern, or a mill known as a shiriushi. This has two working parts: a base about a foot in diameter and perhaps a foot in height. It looks like a smoothed off log. In the center, there is a wooden pin, perhaps 1 1/2 feet long. Over this part, which looks like an upright piece of a log with a rolling pin stuck in its center, the upper part, made of wood and of the same diameter is fitted. A bar across the inside of the top of the upper part has a hole for the pin. On the outside, wooden plugs provide places for attaching ropes. [462] These are pulled back and forth by women sitting opposite one another. The rice is poured in at the top, the quern is moved first clockwise and then counterclockwise, the rice coming out in the rough crevice where the two pieces join. The rice is put through the quern as many times as is necessary to effect the polishing. In some querns, the inside of the upper part is grooved to quicken the polishing.

In polishing rice in this way, the mill is placed on a mat and the rice is gathered up periodically and put in baskets. It is then winnowed by tossing in a flat basket. Many of the farmers in the village still have a shiriushi in their sheds, but it is seldom used.

Rice may also be polished by the use of rude wooden mallets. These have a handle about 3 feet long and a head about 1 1/2 feet long. Rice is placed in a mortar with straw on top. It is pounded, often by two or three women swinging alternately. After the hulls are removed, the rice is winnowed, and put back in the mortar until a rough polish is secured.

Uses of rice. Every part of the rice plant has a use. The stubble, left in the ground, becomes a part of next season's fertiliser. The chaff and waste dust (nuka) is saved for pigs, cows, and other domestic animals. The hulls often are used for fertiliser, before or after burning. Rice straw has a variety of uses. The most frequent and important of these is for making rope.

After threshing, the straw is dried two or three days. Three or four stalks of about the same length are taken and rolled between the palms. The lower palm, usually the left, is open and up. The right palm rolls the straw into a twist. As the rope grows, new stalks are inserted one at a time, and, when needed, a new length of straw is added. This is not a strong rope, but it has a variety of uses, such as tying down the grass thatch to the roof poles, children's swings, and clothes lines. Mats and pads shaped like a life saver and used to set the sugar pots on after the sugar has been boiled, are made out of rice straw. Another use is in the making of the Ōda (Okinawan). This is a mesh about one foot wide and two feet long. There are loops on each corner. The end of a pole may be inserted in these loops when gathered together. The pole is carried over the shoulder, and sweet potatoes, straw, or other articles may be easily transported. Simple brooms without a handle, little more than a bunch of straw tied together in three places are also made of rice straw. Twisting and braiding rice straw is likely to be rainy day work. These articles are most often made twice in the year, corresponding with the harvests.

At typhoon times, if rice is not completely destroyed, the damaged rice may be used for pig food. The preparation of this rice is women's work. The rice is put in a mortar and pounded with a mallet in the manner already described, although a single operator usually does the work.

Types and preferences. As a general rule, the selection of varieties of rice for planting depends on taste, the nature of the soils, and individual judgment of the expected yield of each type. In Matsuda, it is estimated that about one half of the rice is the Formosan variety, Taichu 65 (Taichu rokujugo), in Okinawa known as horai. Another variety, Kunigami #1 (Kunigami ichigo) represents about one-fourth of the crop. Mochigome (akaho) takes up about another one-fourth. This glutinous rice has a brown reddish rust colored kernel and is used for rice cakes. A fourth variety, horai-mochimai, is also well liked. No black rice is grown here.

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Matsuda. Polishing rice with a hand mill. This is a posed picture, but rice was polished this way up to shortly before the war. The grass mat prevents wastage. On the left is some Yambaru bamboo. The women are barefooted. The towel-like headdress is not uncommon.

[P. 185(A)]

824 Soy beans have three main uses: soy sauce which is seldom made [262] in the home, bean curd (tōfu) and miso, a bean paste, both always [432] home made. For this reason, soy beans are grown mostly for home use, [962] with the surplus sold. In Hanashiro, where the surpluses are greater, [494] the beans may be sold in Naha, Shuri, or Itoman. Women do the selling, taking the beans to market on the buses, trucks, or three wheeled vehicles.

(2) Other types of beans such as the red dwarf bean (asuki) 241 Phaseolus angularis Wight), the kidney bean (ingen in Japanese, 262 Phaseolus vulgaris L), the broad or horse bean (soramame in Japanese, Vician fabia L), and peas (endō in Japanese, Pisum sativum L) are grown for home use, usually in parcels which are closest to the house.

(3) The giant radish, (daikon in Japanese, Raphanus sativus L) [263] is, after the soy bean, the most important of the minor crops grown for home use. This is the vegetable most favored either as a condiment, [252] or as a side dish. It is eaten sliced raw, pickled, or fried in strips in soy sauce. When eaten boiled, its flavor resembles that of a turnip.

(5) The pumpkin (Cucurbita pepo L) called nanka or kabocha, the latter name being derived from the word Cambodia from which the pumpkin was introduced into Japan. They are harvested in summer, and one crop a year, generally for home use, is grown. If the flesh [231] becomes too ripe and turns reddish and sweet, it is not relished and the pumpkin is fed to the pigs.

(6) The cucumber (kiuri in Japanese, Cucumus sativus L) is a very minor crop. In none of the villages were they generally grown, and then only for home use.

(7) The hechima or tōgwa in Japanese, subui in Okinawan.[7] This is very large and cylindrical. In exceptional specimens, its outward appearance is indistinguishable from the water melon. Its flesh is [184] white. In the two southern villages, the tōgwa is grown very sparingly. In Katsuda and the surrounding villages, it is more common. Here it is used to fill in during times of food shortage. Some specimens I have [221] seen weighed over 100 pounds. It is planted after lunar New Years, harvested in the 6th or 7th lunar month, a period reaching from about January to May. From April to July, when other vegetables are scarce, [252] it is often used as a substitute. The flesh when boiled is rather tasteless; it is commonly boiled and served with chunks of meat. The tōgwa, in the northern villages, is often stored in dark cool places away from the sunlight, often under the house. If not cut open, the [251] melon can be saved for a year.

7 I am not certain whether this is Luffa cylindrica Roem, Luffa petola, Ser, the Luffa sponge, rag gourd, etc., whose pulp disappears when ripe to be replaced by a web of fibres.

melon can be saved for a year. It is also served raw with vinegar and sugar dressing, often mixed with another vegetable to make a salad called namasuguwa in Okinawan. 241 262 [252]

(8) The burdock (gobo) is also very minor and usually grown for home use. It is boiled when eaten.

(9) The carrot (ninjin) is a minor crop.

(10) The trumpet or bottle gourd (yūgao) is only grown in Matsuda and for home use as a summer food. [184]

(11) Spinach (hōrensō), onions (negi), Chinese lettuce (hakusai) are not uncommon. Spinach, lettuce (chisi), and onions do not have the importance either as a crop or a food that they have with us.

(12) The taro (satoimo in Japanese, Colocasia esculenta Schott) can occasionally be seen growing in Hanashiro or Matsuda, often on the edge of a rice field. It is known locally also as taimo and apparently is the same as the Japanese dasheen. The taro is used as a side dish.

(13) The Irish potato (bareisho) is occasionally grown for sale. [432]

(14) Cabbage (tamana) is partly a cash, partly a home use crop. It is also minor. Some Okinawans like cabbage and grow it for their own use, but many dislike it and sell the crop.

(15) The grains are an unimportant part of village agriculture. The most common are barley (ōmugi), wheat (komugi) and millet. (Mugi is a general term for grain. The ō means large, the ko, small, referring to the kernels of the two grains). [193]

Although comparable statistics were not available for each of the villages, the following table from Hanashiro clearly shows the relative importance of the major crops: 241 311

HANASHIRO
Crop Acreages, 1950

Crop	Area in Chō [a/]	Percent of Total
Rice	10.89	100.0
Total Dry Crop Land	59.88	100.0
Sweet Potatoes	35.86	59.9
Soy Beans	13.63	22.8
Sugar Cane	5.41	9.0
Beans and Peas (excluding soy)	2.30	3.9
Wheat	1.80	3.0
Millet	0.50	0.8
Vegetables	0.38	0.6

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226 most important.

226 (1) The sword or spearfish (kajiki in Japanese, akitere in
136 Okinawan). This fish (some specimens reach 450 pounds) is caught
[227] from May through September. Fishermen go about 12 miles out for the catch. A wire leader 15 feet long with a hook is attached to a 1400 foot braided cord line about 3/16 of an inch in diameter. The line is gradually played out after the initial 700 feet are lowered. Swordfish fishing is done in the daytime. The fish is said to be scarce at night. The hook is about 2 1/2 inches long.
262 The swordfish is considered the most delicious of fish. It is ex-
[435] pensive, selling from ¥50 to ¥100 per kin (slightly over 1.3 pounds)
[432] depending on season and supply; consequently, fishermen sell rather than eat it, except in times of oversupply. Large fish are usually cut up before being sent to market; the small ones are sent whole. The swordfish is ordinarily eaten fresh. The favorite method of
[252] preparation is to fry it after dipping a slice in a batter of flour, dried milk and water. Occasionally it is eaten raw as sashimi. Dried swordfish is considered a delicacy. Unlike the shark, the fins (hane) are not dried.

226 (2) The tunny (subinoue in Japanese, subi in Okinawan). This
136 fish is caught between April and November. Here there are two ways
[227] of catching the fish, depending on the type of boat. If the large boat, the hatsudōki, is used a long line with as many as 200 hooks set 75 feet apart is used. At intervals of every three hooks, there are buoys with flags (hata). These flags, alternately white and red, are about the size of a large handkerchief. In another arrangement, the buoys may also alternate with the flags. The same line and wire leader used for the swordfish are employed with tunny catching, but the hook is smaller. When submerged the hooks are at various depths, their paths describing semi-circles from buoy to buoy. Lines may be pulled in from one to four times a day, depending on the biting. The bobbing of the buoys and the flags indicates the biting and the probable catch. A fishing party remains out for three days, leaving at five in the evening, returning about ten in the evening of the second day.

The small boats use two lines, the longer going down from the center of the boat, the shorter near one end. The method of catching the tunny is the same as that for the swordfish. In night fishing, the line might be lowered fifty feet, gradually playing out ten feet at a time. Tunny fishing is mostly a night catch. The line during night operations may be let out 700 feet, and, in the day 350 feet.

(3) The shark (fuka in Japanese). This fish is caught in the same way as the tunny. Fishing takes place both during the day and night. On the small boats, the line and its 15 foot leader with one hook, is about 840 feet long, and the entire length is let out.

(4) The mackerel (hishisaba). The main season for catching the mackerel is from March through May. These fish, usually weighing about 30 pounds, are caught by divers who seek the fish out while it is sleeping under stones. A strong line is tied around the tail and the fish is pulled up on board. There it is killed with a short

434 The money
593 earned by women in the marketing of the fish, after deduction of travel expenses, becomes part of the family funds. Women in the fishing village have custody of the family money, due to frequent and prolonged absence of their husbands. This is an unusual practice, for in the agricultural and stonecutting areas of the village the husband handles the money, with the exception of a few yen which the wife may have at home to meet incidental expenses. The custody of the money (much made over by some observers) has no special cultural significance in my observation. It is merely a convenience, based on custom and occupation. Most earnings of husband and wife are in a common fund, though older children may handle their own money.

6

Other Activities Associated with Fishing

251 There is some local drying of fish for home use and export. Of
[439] the common fish, the most frequently dried are the mackerel, the swordfish, and the shark. Shark fins are dried for export to Japan; before the war, they were also sent to China. The small amounts dried in local villages are accumulated in places like Naha for shipment. Drying processes are of the simplest. The fish may be laid out on a piece of canvas on the ground in front of the house, an operation which creates a stench and an overwhelming concentration of the blow fly population. Racks may be improvised. Their ends, made of odd pieces of wood, support thin bamboo poles laid parallel, on which the fish are put to dry. Sometimes fish are hung on a line. If the weather is good, they dry in two or three weeks, but rain quickly produces spoilage if the fish are not taken in immediately. The mackerel when dried may be heated up by placing a piece over the open fire, then rolled between the palms to see if it has been heated enough, torn into shreds, and put on a plate. Occasionally a poor family of non-fishing people, or a widow, purchases whole fish or backs or fins to dry for home use or resale.

278 Certain fish are valued as medicines. Their scarcity in agri-
825 cultural villages prevents any but the most casual use. In Minatogawa, the commonest fish used as medicines are the lobster, the white cuttle fish, and the carp (koi), though the latter fish is rare here.

[252] The whole lobster is put into boiling water. After a few minutes,
this broth, which is the medicine, is drained off, and the lobster is cracked open and heated, this time for preparation as a food. The
759 broth, which is regarded as very disagreeable, is taken for a variety of ailments. Its commonest use is as a laxative, although it is also taken for swellings, boils, or gatherings of any kind (haremono), for pains in the small of the back and the loin, or for a cold. The lobster broth is regarded as a very effective medicine. A white cuttlefish soup is put to similar use. The carp is boiled in water and the broth is drunk for fevers. The carp may also be grown in village ponds.

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8

Daily Life of the Fishing Village

Fishing families may have informal gatherings toward the end of the day. On a late summer afternoon, the family may sit in the open doorway of the house, for hedges, fences, the barriers, and trees are rare. The wife may be nursing her naked child. Her husband, a fisherman, has changed into his indigo blue and white striped kimono, a tall, broad, deeply tanned man. Next to him sits his mother, over 70 years old, her hands tattooed, as are those of all the old women. She is wearing a kimono of the same color, but of a dot pattern. They sit on unrolled mats. On the veranda, three or four men, unwashed and still in their work clothes, discuss the events of the day. A lacquer tray with tea cups is on the floor near them and the tea (as it so often is) may be cold. There is brown sugar to eat along with the tea. The grandmother may be economically smoking a half or a third of a cigarette in the typical Japanese pipe. As it grows later, the wife gets up, pours some water in the stone mortar, and smashes the sweet potatoes with the long wooden pole. The men continue talking for a while, then take their leave. The wife, her work at the mortar finished, goes into the dirt kitchen to start the evening meal.

The wife of the fisherman has worries that do not bother the farmer's wife. There is always the danger that her husband, or son, will not return, a real possibility, of which the frequency of widowhood in Minatogawa is proof. Every season, there is at least one instance of a fisherman who has either been lost, or whose delay in returning has provoked intense worry. If crews are still out when an unexpected storm arises, there is considerable tension in the village. Since the war, rescues at sea are more likely than before. The village headman quickly reports overdue boats. The American forces have created much good will in seeking fishermen lost at sea.

Women, on the other hand, have opportunities for leisure when the catch is light, or weather is unfavorable. At these times, they can busy themselves with other tasks, in the field, gathering stones, getting miscanthus, but they do not have the unremitting activity of the woman in the agricultural village. There is more visiting during the day than one observes in an agricultural village.

The fisherman, with or without land, tries to keep pigs and perhaps a few goats. In Minatogawa, the pens are often made of sandstone quarried here. Not only the floors and the sides, but the stalls are made of this material. One reason for this is the openness of the village and the danger that pigs will be killed in a storm. A typhoon may carry away the house, its owners having gone to the stronger house of a friend or relative, but pigs are an investment and an asset to be guarded.

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The Daily Diet

262 [511]

There is little variation in the basic diet in any of the villages. Among individual families, the chief difference is in the proportion of sweet potatoes to rice; this depends on economic status and the possession of rice fields, the poorer the family, the greater the reliance on the sweet potato. Except for seasonal foods, the diet is uniform throughout the year. Neither is there much variation in the three meals. The basic foods are:

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For breakfast: A soup made out of hot water and bean paste, perhaps with bits of fish or meat added, sweet potatoes, and tea.

For lunch: Rice or sweet potatoes, raw, boiled or fried vegetables, and tea.

For dinner: Bean paste soup, rice if possible, or sweet potatoes, bean curd, and tea.

262

The foods which supplement these basic items are: (1) Fresh fish in season, uncommon for the reasons given in Chapter X. Imported dried sardines and canned fish from Japan are more common in agricultural villages than fresh fish. Even in Hinatogawa, fresh fish is scarce when the catch is light. In summer, the fish is too valuable to eat and only unsold fish is eaten. (2) In Matsuda village, rice and pork are more frequently eaten than in the two southern villages. Rice and pork consumption is indicative of a higher standard of living. Many families have rice twice a day. Beef may be boiled, and with vegetables added, made into a soup. In the winter, the Japanese dish sukiyaki may be eaten, but the meat in this dish is often meagre. [184] [511] [252]

262 252

There are many occasional foods or side dishes of which the following are the most common: (1) bean curd (tōfu). This is made at home by women. (2) Taro (sato imo) boiled and eaten as a side dish. (3) A sweet or unsweetened fritter (tenpura). Japanese tenpura usually is shrimp or other fish fried in batter. Okinawan tenpura may or may not have a filling. Frequently the filling is a paste of brown sugar, or a slice of sweet potato. At celebrations, they may have a meat or a fish filler. (4) The rice cake (mochi) made of glutinous rice (mochigome). (5) Buckwheat paste (soba), and (6) noodles (sōmen). These are fairly cheap and are always purchased. (7) Bread (pan). This is a slightly sweetened large bun, normally with a little jam or jelly filler. The bun is baked in the large towns and distributed generally by boys on bicycles to the village stores. (8) Boiled or pickled radishes, boiled pumpkin cut in small squares and served with a piece of fish or meat. (9) Onion tops and spinach boiled with a seasoning of fish, chicken, or beef. (10) Various vegetables in season.

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13

Home Industries, Arts, and Crafts

438 Home industries, arts, and crafts are not a conspicuous part of the life of the villages studied. Even before the war, home crafts, training in dancing, singing, landscape gardening were not cultivated to any degree.

252 Certain foods, like bean curd and bean paste, are made in the home. There is a standard method of preparing bean curd. The soy beans are soaked until soft and then mashed in a hand operated stone mill or quern. This mill has two round stones. The top stone, turned by hand, rests on the stationary bottom stone. The crushed beans, thinned by frequent dashes of water, ooze out of the space between the two stones. This liquid is collected and strained through a cloth drawn over the top of a frame box. The residue in the cloth is saved for pig food. The liquid is boiled. After it curdles, it is strained. The curds remain in the cloth, the liquid [231] is also used for the pigs. The curds, of the consistency of a soft cottage cheese, are wrapped in a cloth and put in the frame box. A tight fitting lid is put on the box and pressed down hard to expel the rest of the liquid. After the curd has been thoroughly pressed, the frame box is turned upside down, the curd taken out, and the cloth wrapper removed. The smooth mold can now be sliced. It is a common sight to see women operating these mills in the villages before a family celebration or a public holiday. Bean curd, fried, [574] boiled in a soup, or in a mixture with vegetables, or as an ingredient of sukiyaki is always served at a party.

251 252 [264] Bean paste (miso), an even more important food, is also made in the home. Most families serve bean paste soup (misoshiru) every meal every day. It has four basic ingredients: soy beans, rice (or barley), salt, and water. Recipes differ considerably among families. In one recipe, 8 sho of rice are boiled, after which it is spread out on a large flat basket to drain, and then placed on a mat and allowed to ferment for about one week. An equal amount of soy beans, crushed in a stone mortar, is mixed with the rice. Salt (about 7 go, one go being 1/10 of a sho) is added and the mixture is boiled.[8] The salt retards fermentation and is a preservative. If obtainable, an American hand food grinder is preferred to the mortar and pestle. The mixture is put in a large jar (tsubo) which is placed in the kitchen or in a storeroom and allowed to stand at least a year, sometimes for three. With age, the paste becomes sweeter and is considered to be better. A woman may make three large jars of bean paste 3 times a year, the frequency depending on the size of the jars. Some are 5 1/2 feet high. Occasionally the cycad is an ingredient of miso. Every house has a supply of bean paste. When ready for use, it is very soluble in water.

[804] 8 A koku equals 10 to equals 100 sho equals 1000 go, 47.96 US gallons liquid, 5.12 US dry bushels.

529 Young girls with pots of hot tea circulated in the audience. The
202 stage performance was a combination of local amateur talent and
535 professionals from Naha. Normally the entertainment begins with
a traditional Okinawan dance by a professional woman dancer, followed
536 by a short skit. Conversations in Okinawan between an educated man
and a stupid rustic are favorite subjects. Acts of this type are
greatly enjoyed and cause laughter, mainly I was told because the
jokes had sexual overtones. The shorter acts are followed by a play.
(The theme of this play will be discussed in the following chapter).

6

Other Holidays of the Year

824 Chrysanthemum day, the ninth day of the ninth month (October 9,
1951), is a very minor holiday. A chrysanthemum is put in sake, and
the flask is placed on the god shelf. A leaf of the plant is put in the
sake when it is drunk. People at this time wish one another good
health. The festival is only spottily observed.

262 There is a minor public holiday, the rice cake festival (mochi no
252 matsuri), said to be native to Okinawa, on the 8th day of the 12th
lunar month (January 4, 1952). On the day before, women prepare red
and white cylindrical rice cakes, about 4 inches long and one inch in
diameter. These are wrapped in the leaf of the sannin plant or in the
leaves of sugar cane. The glutinous rice cake is made by first soaking
rice in water and then mashing it in a hand mill. The rice is put in
a cloth bag to allow excess water to drip out. The following morning
the rice is boiled and shaped and wrapped in the leaves. The cake is
doughy and insipid to taste. On the morning of the 8th, the cakes
are placed on the god shelf and after prayers the cakes are removed.
They are served during the day to guests. Sometimes children attach
strings to these cakes and hang them about the room. The holiday is
not observed by every family in the village, but it was recognised
in all the villages studied.

The festival of the winter solstice, the longest night of the
year (tōji) is known, but Hinatogawa was the only place in which its
969 observance was noted. It is a home festival with prayers and the
familiar offering of assorted foods to the ancestors.

Western Christmas is not observed in any of the villages. It
177 would not be surprising if it should become a holiday, with gift
giving, feasting, and drinking, but without the religious connotations.
Since the occupation, Okinawans have become conscious of Christmas.[6]

797 6 I was told that in certain villages of the northern district, such as
Kushi and Higashi near Ogimi that there is a Christmas festival, with-
out the gift exchange, a survival of earlier missionary teaching. Time
did not permit me to verify this, but there seems little doubt that a
Christmas festival does exist in some Okinawan villages, judging by
the frequency with which I heard of it in Matsuda and Ginoza villages.

an empty oxygen bottle with a wooden mallet to mark the time. The noon bell tells people in the fields and mountains that it is time for the midday meal and helps those who have a clock to compare the time. The evening bell indicates that it is time to end the day. Schoolchildren do not need a clock, since they get up early in the morning and go to school soon after, knowing that they are probably early. For most adults, daylight and sun position are enough to tell the approximate hour of the day. Some take arrival and departure of the bus, four times a day, as a point of orientation.

Old women are the first to rise in the morning. Long before dawn during the winter, or with the first light of the summer day, they get up and start a fire to boil sweet potatoes and heat the soybean soup. Blue smoke rising through the thatched roof into the early morning sky indicates that life in the village has begun. Children soon awake. The door is pushed open and a sleepy child appears to urinate off the edge of the house. Men are the last to rise. Considering the effect of the sake which they may have consumed on the preceding evening, it is remarkable that they are able to wake up so soon. By 6:30 the sleepiest person has risen.

The addition of outer clothes to the underclothing in which most people sleep is simple. Cold water splashed over the face and a quick turn at the toothbrush is all the toilet needed to begin a new day.

The task of folding comforters and taking down the mosquito net falls to one of the older children or to the mother. Older children and young girls help to carry water from the tank, the first task that has to be done after getting up. After breakfast, women feed the pigs. By about 7 o'clock everybody is ready for work. On a good day people leave for the mountains or start toward their fields—schoolchildren are on their way, too.

By 8 o'clock, except during very poor weather, the village is left to the old people and young children. Little boys and girls hang around, waiting for kindergarten to start at 9 o'clock. Play begins for them after they leave the house in the morning and does not end until evening.

For men and women, the routine of work in fields and forests is prescribed by seasonal activities which demand their special attention, but there are daily chores, such as digging potatoes, picking vegetables, and collecting feed for the animals and firewood for cooking. Only a few men who go to the mountains, taking their midday meal along, are away all day. The rest come and go during the day from the rice paddies, potato fields, or forests, so that there is repeated contact between children and their parents. A young child, even if left in the

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Taira

ments fail to form rope. Her brother quietly takes the straw and without a word demonstrates the deft movement. She watches and tries again when her brother hands it back to her. She is unsuccessful. As she starts to whine again, her brother picks up a length of finished rope and gives it to her. She runs happily toward the playground, waving her rope in the air. 868 [283]

Although young children are not taken to the mountains, they can sit in the village afternoons and watch adults sawing, splitting, and working the bamboo rings used in tying faggots. Boys do not go into the mountains to cut firewood until they are about 10 years old, girls until they are 12, although they may have begged their parents for several years to let them help with cutting and hauling of firewood. But as long as they are still too young for mountain work, they try to use the cutting tools. Tools are left within reach of children so that opportunities for experimentation are almost unlimited. Only their size and weight deter the youngest children. A 2-year-old girl was seen imitating her mother by attempting to whittle off pieces of bamboo with a large 12-inch blade bushknife. A teen-age girl working nearby passed the little girl several times without saying anything. The little girl's father also worked nearby but, like everyone else, was too absorbed in his work to notice his daughter. Finally her mother looked up from where she worked, noticed the huge knife in the girl's hand, and saying in a loud, angry voice, "Why do you carry this, fool?" took the knife away. [313] [412]

Other small children pick up hoes and forks to try them in the yard or in the pigsty. Sickles and knives are used expertly by many 6-year-olds. Bandaged fingers and numerous little scars are evidences of learning and experimentation. Occasionally an adult will say to a 9- or 10-year-old, "Hold the sickle this way so you won't get hurt," but more often than not the child has already learned by himself. One 4½-year-old boy shinnied up the side of a feed box to get a sickle. There was no adult around to peel the long stalk of sugar cane he had been given, so, with expert strokes and handling of the razor-sharp tool, he shaved off the thick, hard skin. By the time his mother arrived on the scene, the child was busily chewing and sucking on a considerable length of the peeled cane. The mother was asked who had taught him to use the sickle, and she was at a loss for a reply. "I don't know! He must have watched us and learned by himself by trying it out!" she said. [412] [264]

Little girls watch their mothers cooking and doing other household work. By watching and asking questions they learn how to light a fire and when to extinguish it to cook a perfect pot of rice. They [252] [296]

Population Density The pattern revealed in a map of population density---Map 4---is approximately the same as that for percentage of arable land. It is somewhat complicated, however, by the urbanization that is going on in Nakagami. A more detailed discussion of the population movements responsible for this situation will be found in a later section of this report. 161

Farming Almost all of Okinawa's rural people farm, and many are engaged part time in home industries which utilize local products. Particularly noteworthy are the vegetable-producing areas. Kitanakagusuku and Ginowan 'sons' are centers of vegetable production for the American military forces.[1] The inland 'son' of Haebaru grows 53% of the gunto's tōgwā, a wax melon that is a favorite Okinawan food. 433 241 [262]

One of the most remarkable agricultural areas, Tomigusuku, lies south of the Naha-Mawashi-Orcku urtan complex. It grows many kinds of vegetables for the cities, and ranks high in other production. Tomigusuku stands first in the gunto in acreage of green beans, muskmelons, bananas and eggplant. Almost one-fifth of the latter comes from here. It ranks second in tomatoes, and ties with Yonagusuku for second place in weight of mat reeds produced. Miwa, in the far south, leads the gunto in soybean acreage, while Nishihara occupies a similar position in acreage planted to pumpkins.

The most remarkable 'son' in northern Okinawa is Nakijin on the north shore of Motobu peninsula. It leads in gunto acreage of sweet potatoes, leaf tobacco (75.2%), and cucumbers. In animals it leads in numbers of pigs and ducks. It also produces 76% of the banana cloth, or 'bashōfu', of the gunto. This 'son' is mainland Okinawa's chief wheat producer. [231] [235]

The small Okinawan acreage of Irish potatoes is found in Ōgimi-son to the northeast. Yabu is noted for its pickled giant radishes, or 'takuan'. The offshore islands lead in certain special crops. Minami Daitō leads in sugar cane, wheat and barley. Ie Shima seconds in barley, and Izena seconds in wheat. Ie Shima is far ahead in acreage of Irish beans, or 'azuki', accounting for 41% of the gunto's planted acreage of this crop. Though Ie Shima ranks only 15th in soybean acreage, it produces almost a fifth (18.4%) of the gunto's 'miso', in which soybeans are used as a base. 'Miso' making is one of the main home industries on the island. Ie Shima, Kamimotobu and Nakijin retain some of the old 'awa' (German millet) complex, between them accounting for over a third (34.3%) of the acreage of that crop in Okinawa gunto. Kamimotobu is mainland Okinawa's leader in acreage planted to ordinary millet ('kibi'; Panicum miliceum). [252]

Nakagami has little of agricultural distinction. Yomitan leads the mainland in acres of barley and number of rabbits. Gushikawa is second rank in sweet potato acreage, but produces about two-fifths (39.4%) of the gunto's sweet potato starch. It leads in numbers of goats, and is second though not outstanding in numbers of bullocks. [231]

[1] Most of this and following paragraphs derive from Ryūkyū tōkei hōkoku and Okinawa guntō no tembō. Some is based on personal observation and interviewing. [127]

military competes with sugar as a primary cash crop, and cane fields are being converted back to rice paddies as fast as the farmer's resources permit. A more detailed discussion of the crop changes in the last two or three decades follows. 175 241 178 433

Chronology of Change in Crops The major changes in crops revolve chiefly around the replacement of rice as a cash crop by sugar cane, and the later reversal of this situation. About fifty years ago, rice was the chief cash crop. It was rarely consumed in the home, but was sold in order to meet the monetary expenses of taxes, and to buy occasionally the new commodities that were beginning to appear in the markets. Then, not long after the Russo-Japanese war had ended, the price of black sugar jumped almost overnight from ¥8.50 to ¥64 for a 150-'kin' barrel. Everyone wanted to get a share of this boom in sugar, and most began to convert paddy land into 'hatake' for the growing of cane. They were stuck with the 'hatake' when the price fell after two months. The Japanese subsidized sugar later, however, and most of the land that had been converted remained sugar land. [654]

When the people began returning to their farms more than a year after the end of World War II hostilities, there was little market for sugar. The subsidy had gone with defeat, and providentially the sugar lands were available for the growing of more sweet potatoes. American canned food and sweet potatoes were the main items of diet until about 1949. Gradually farmers began to convert 'hatake' to paddy fields, and to grow rice again---this time less for sale than for home consumption. [262] [177]

The old "bearded rice" varieties (fijimē and mēdakōja) of the nineteenth century were replaced gradually by the shorter-statured but higher-yielding 'hōraimai'. The bearded rice, planted only once a year, had a yield of about one-third the present variety, and had only five or six stalks per plant. The twice a year modern variety yields more and has on the average fourteen to fifteen stalks per plant. As a result of the adoption of the two-crop variety, at least one traditional ceremony was abandoned. This was the tantui, in which the whole village participated before simultaneously planting their seedbeds. Before the war, two-thirds of Okinawa's rice requirements were imported.[1] Indicative of the postwar change to rice are the figures for area of paddy-fields in Kochinda-son; the 114,142 'tsubo' of paddy in February of 1948 had increased to 306,220 'tsubo' by September of 1952. Field investigation proved that conversion to paddy has proceeded at least as fast since 1952 as it did prior to that date. 175 241 433 243 178

Before the First World War almost everyone in Nanahan raised forty to fifty 'tsubo' of millet. It was boiled with glutinous rice to make millet rice-cakes, or 'awamochi'. None is raised now. The same is true of cotton. "It grew only a foot high, but its fiber was very strong and would last a lifetime." Some other crops lasted into the post-war period. Until about 1950 textile bananas and yams were raised in Nanahan, but they both proved to be too weak in typhoons, and their cultivation was abandoned. 178 175 241 [252]

1 Summation....July-November 1946, p. 25.

Before the war Okinawa imported half its soybean requirements. By early 1951 the prewar acreage had been cut by half.[1] This resulted in the necessity to import soy sauce tax-free from Japan, which brought an ineffective protest from the Legislature early in 1954. 'Miso' paste, which is made of soybeans when they are available, is now made also of corn, broad beans, kidney beans, and various other legumes.

As early as 1946 the occupation forces reported:

> Rapid restoration of Okinawa's prewar agriculture is hampered chiefly by an arable land shortage induced by military requirements in the southern half of the island, where roughly 30,000 acres are devoted to military use. War damage and migration from combat and, later, base development areas seriously disrupted agrarian economy and early planning was delayed pending disposition of farm tracts affected by military expansion.[2]

That loss of both upland dry fields and paddy land was affected is shown by the following:[3] (figures are in 1,000's of acres)

Table II

Type of Land	1940 Acreage	1950 Acreage	% of 1940
Cultivated land	103.8	67.2	65%
Paddy land	11.5	9.6	83%
Upland fields	92.3	57.6	62%

Even more significant is a comparison of the 1940-1950 figures with those for 1904, which show the situation which existed before any Japanese military installations were built.

Table III[4]

Year	Acres Paddy Land	Acres Dry Fields	Total Arable Acres
1904	15,779.1	93,952.6	109,731.7
1940	11,527.25	82,273.86	93,801.11
1950	9,559.56	57,610.16	67,169.72

1 Ryukyu Islands Economic Statistics Bulletin, no. 10, January-March, 1951.

2 Summation...op. cit., p. 26.

3 Ryukyu...., p. 13.

4 The 1904 data are from Summary of the Land Adjustment in Okinawa Prefecture, Tokyo, 1904. The 1940 and 1950 figures are from the reverse side of the large map, Okinawa shotō shōzu.

412
● 252

chichiūshi

wooden rotary mill

407 ←
412
252 →

cakkokki

wooden rotary mill

[facing p.17]

It apparently did not find
178 widespread use in Tomoyose, for that village passed almost directly from the use
243 of bamboo tongs to the rotary thresher, or 'dakkokki' (see photo). Yamada first
412 saw this thresher about 1933, but Nanahan farmers began using it only in 1941.
[407]

Hulling of grain was in the past accomplished---as needed for home use
178 or sale---by using a wooden rotary mill (see photos) called fichiūshi in Yamada
252 and shiriūshi in Nanahan. In Yamada two women sat with their feet braced against it, and pulled straw ropes alternately. In Nanahan men did the hulling, and the rotary mill was lower but was three feet in diameter. In the late thirties motor-powered hulling mills were built in many areas, and farmers took their rice there for hulling and polishing.

Polishing of brown rice in Nanahan was accomplished until about 1935 by use of a mortar, or chichiūshi (see photo), and pestle, or ajin. Most families still have these in reserve, as they were used after the war and were replaced by rice mills only after 1949. People in remote areas still use them exclusively. Nowadays people have their rice hulled and polished in one operation at a rice mill, if it is close at hand.

178 Very little wheat was grown in the three farm villages studied, but
246 it was noticed that on the outer isles wheat was more dominant. On Henza isle, removal of the grain from the sheaf and hull was accomplished by rubbing it upon a piece of bumpy limestone. On Kudaka, separation was by rubbing on a canvas, both with the hands and feet.

178 After the war farmers took advantage of the spread of the lantana bush,
241 which had flourished due to the neglect of the land. It furnished an excellent
[342] livestock feed, and also a short pole which they could use in roofing their rebuilt houses. Such poles, or kichigwā, had formerly been brought down from the forested north country.

178 Chronology of Change in Livestock Recovery of the land after the war pro-
727 ceeded far more rapidly than replacement
231 of the livestock killed or eaten in the invasion. The following table illustrates the loss and slow recovery (except for swine) in livestock numbers:

Table V

Type of Livestock	1940[1]	1946[2]	1952[3]	1952 as % of 1940
Cattle	22,000	112	6,837	31.0%
Horses	25,000	899	5,110	20.4%
Swine	108,426	1,165	107,077	98.8%
Goats	106,257	1,647	58,472	55.1%

In Kachinda-son the story has been somewhat the same, with the exception that there are many more swine and cattle now than in the thirties. This is due partly to the lesser amount of land in sugar and the planting of more

1, 2 Summation....July-November, 1946, p. 26.

3 Ryūkyū tōkei hōkoku, Vol. 3, No. 3, 1943, p. 1. Valid as of 31 Dec. 1952.

262 Sea food eaten differs by the season. Most available in summer are bonito and the sea turtle. Common in October and later are seabream, whitefish, and globefish. Canned mackerel is by far the most common fish food
[325] eaten, and seaweed is a staple in all but the poorest homes. Though every adult in the village speaks Okinawan by preference in everyday life, even the old people rarely know the dialect names for various fish, "because we are so far from the sea." The nearest coast is less than three airline miles away. Before the war most of the fish consumed was bought in Itoman, but with the removal of the railroad and the orientation of bus traffic toward Naha, very little is purchased in Itoman.

252 The entire day's supply of sweet potatoes, for man and beast, is prepared by boiling in early morning in a large pot. It takes about an hour to boil fifty pounds. Those for human consumption are placed on top, with those
[231] for the animals underlying them. Naturally those eaten by the pigs and other animals are the less beautiful, and often slightly rotten ones. When the family eats 'imo', they peel off both the outer and inner skins and give them to the animals. They realize that the inner skin contains vitamins, but it is too much trouble to peel separately. People regard baked 'imo' as more delicious than boiled, but do not make them in Nanahan as a rule due to shortage of fuel. The children often stick 'imo' right into the fire while their mothers are boiling 'imo' for the day. Sometimes children under ten
[857] years of age make baked 'imo' when they collect trash and burn it. When they do this is not determined, but occurs as the children suddenly decide there is enough trash to burn.

242 'O-kazu' (Okinawan: katimun) refers in Nanahan to any dish whose basic
252 ingredients are lard, soy sauce, and 'aji-no-moto' (monosodium glutamate). It is generally made about two times a week. First lard is put in a pan. Then either raw 'daikon' or 'sengei' (dried and shredded 'daikon') is added, together with globe onions. Soy sauce is then added, and the mixture salted to taste. If meat is available, it is put in as soon as the lard is melted. 'Aji-no-moto' is added just before serving.

252 The making of 'miso' paste is a home task for the women and girls. The amount made depends on the weather. Good weather for proper mildewing is generally found in the spring and autumn. At the equinoxes, when most of the 'miso' is made if people have a choice in the matter, mildewing takes two or three days. The process involves two steps---the making of malt ('kōji') and the making of soybean flour or paste. For malt one must use broad beans, wheat or barley, kidney beans or, infrequently, soybeans. The malt materials are boiled until the skins come off. Then they are drained, spread out on a straw mat inside the house, and dusted with wheat flour. Rice straw is spread over the mixture to form a hotbed. When the mildew starts the mixture turns yellow, and is then spread out to dry in the sun. When dry it is stored in a box, to be mixed with soybean flour or paste later. The latter is very easily made. Boiled soybeans are ground up in a meat grinder, and dried. The flour may be stored separately, but it is most often mixed immediately with an
[251] equal amount of malt. To prevent spoiling, about three parts salt are added to ten of the mixture, now called 'miso'. It is put into a pot for "ripening" during the next six months, and then is used gradually. If stored longer than one year it loses its taste.

'Miso' is used not only in soups, but as a flavoring for other dishes. Jūshiimē is rice fried in oil and 'miso', with green onions added. Tōfu-champuru is made by putting shredded bonito and hot lard in a pan, adding a little 'miso' and some soysauce, and one-inch cubes of bean curd, or 'tōfu'. 'Tōfu' was eaten about every three days in Nanahan before the war, and every day about twenty peddlers from Tsukazan went through the countryside selling it. It is eaten not oftener than once a month now. 262 - 252

A strong rice drink, 'awamori', is in evidence at all parties. It is sometimes diluted with orange soda, but more often it is served full-strength flavored with either garlic or red peppers. Before the war the refuse from making 'awamori', called kashijii, was very cheap---about two gallons could be had for fifteen sen---and was generally fed to pigs. However, it also furnished the base for kachijē-ēi, made by pouring hot water on half-boiled spinach or swiss chard, and adding the liquid from the refuse. It was said to have been very good for the stomach. 273 [231] [257]

Feast Foods When a person reaches the age of 61, 73, or 85, a celebration known as tushibii is held. This is the occasion for a feast of whatever proportions the extended family's budget can afford. In the spring of 1954 a Nanahan lady who was a member of the dominant family reached seventy-three. The following was served at the feast: 262 574 [561]

--Paddy taro boiled in sugar syrup
--Soup containing 'konnyaku', pork, tripe, goat meat and ginger
--Giant radish and carrots, shredded in vinegar
--Several slices of fried bean curd
--Fish cake
--Deep-fried sugar batter
--A dish of 'konnyaku', 'daikon', pork and shredded radish
--Deep-fried whale tripe in peanut butter sauce
--Red rice; noodle soup
--Fried bean curd and pork, with seaweed

In addition, guests were given two boxes to take home, which contained the following:

--Two pieces of pork
--1 piece fried bean curd
--Two pieces of fish, deep-fried in batter
--1 piece of pork heart
--Two pieces of fish cake
--A red-dyed hard-boiled egg
--Two pieces of burdock root, deep-fried in batter
--Two pieces of sweet pound cake
--Two pieces of kujimuchi (a rice cake)
--Two large pieces of deep fried sugar batter
--One deep-fried flour dumpling
--Five cakes of baked rice flour, in shapes of the pine, bamboo, plum, crane and tortoise---symbols of longevity.

261 Famine Food and Wartime Substitutes The standard famine foods on Okinawa
262 have always been dried sweet potato chips or refuse from the making of starch, sago palm nuts and the pulp of the same palm. The latter two are eaten with restraint, as they contain small amounts of an alkaloid poison. The sweet potato materials are made into soups, [252] and the sago palm provides a type of flour for deep frying, or 'tempura'.

[137] During the last war, soups were also made from the stem of the plant Ligularia Kaempferia, known as 'tsuwabuki' in Japanese, and chiipappā in Okinawan. One Nanahan farmer related, "The chiipappā which I ate in Kin-son during the war was delicious, and one felt better after eating it. When I came back here, I tried our local variety, but it is bitter and inedible." The [252] giant African snail was used to alleviate famine just before the invasion. It was boiled in its shell, then de-shelled and the "snail juice" washed out with a bitter orange called shiisā. The meat was then fried with vegetables and the white part of a leek.

273 Japanese soldiers during the war taught the Okinawans how to make a
177 strong liquor from sugar cane, as no real 'sake' or 'awamori' was then avail-
276 able. Tobacco was also scarce, and pine tree bark was substituted. Some peo-
ple preferred to smoke the leaves of the 'mogusa' plant, which is also used
272 for cautery. One very poor family in Nanahan still retains the practice. Tea could not be bought in the late pre-invasion period, and the beans of the lantana bush furnished a palatable substitute.

263 Uses of Sugar in the Home When a guest calls at an Okinawan farmer's home,
he is served tea, black sugar chunks, and quite [574] often 'awamori'. Many other uses were related. It is used in batter for deep [757] frying; for cure of headache, sickness, and fainting spells; for a hangover; and when food is not delicious.